Figure 4.10 San Bernardino Station Distribution Segment 1C

E St northbound - 8.3%
La Cadena northbound - 8.3%
Rancho northbound - 8.3%

Figure 4.11 March ARB Station Distribution Segment 1A

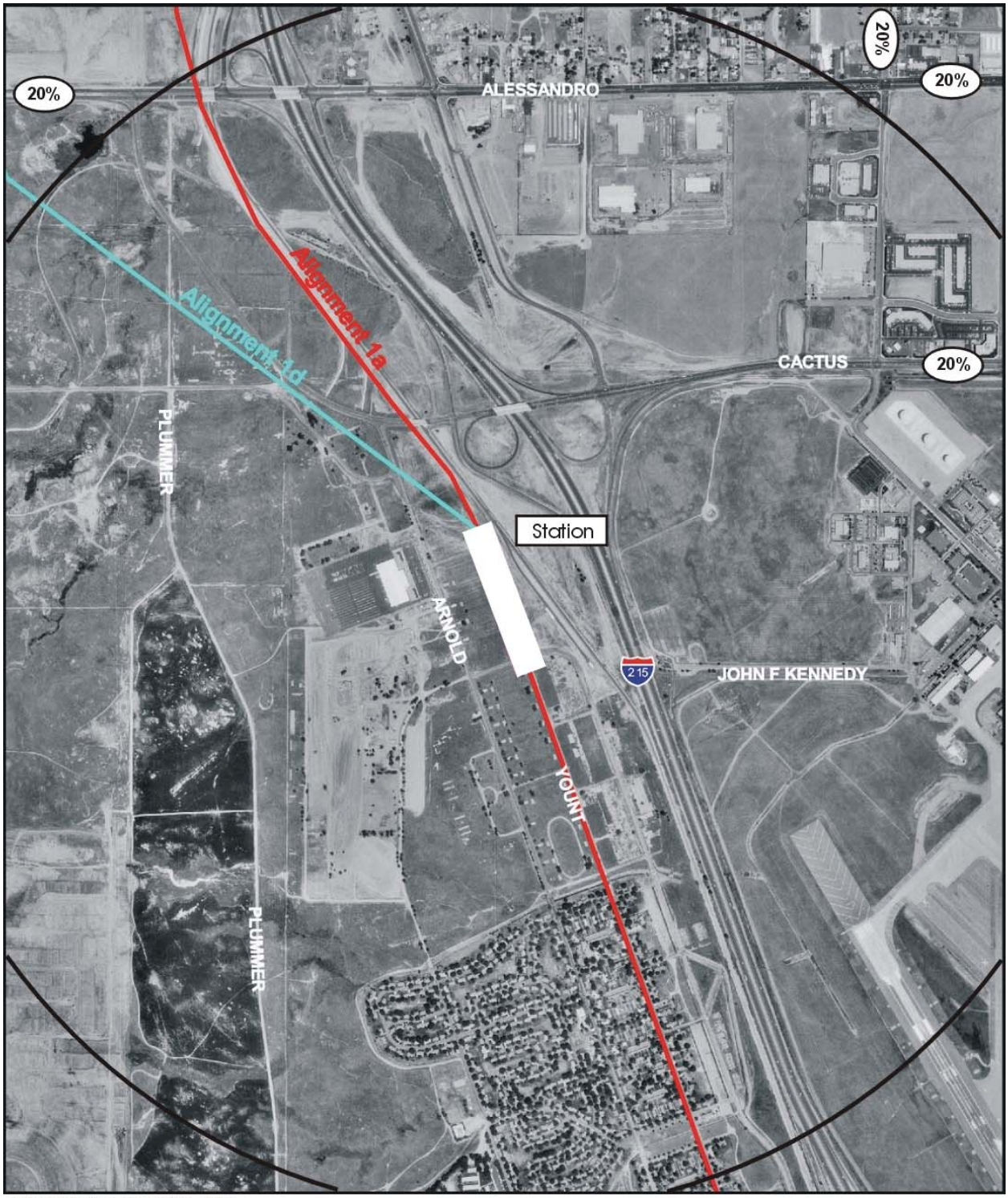


Figure 4.12 Temecula Station Distribution Segment 2A

Figure 4.13 Escondido Rock Springs Station Distribution Segment 2A

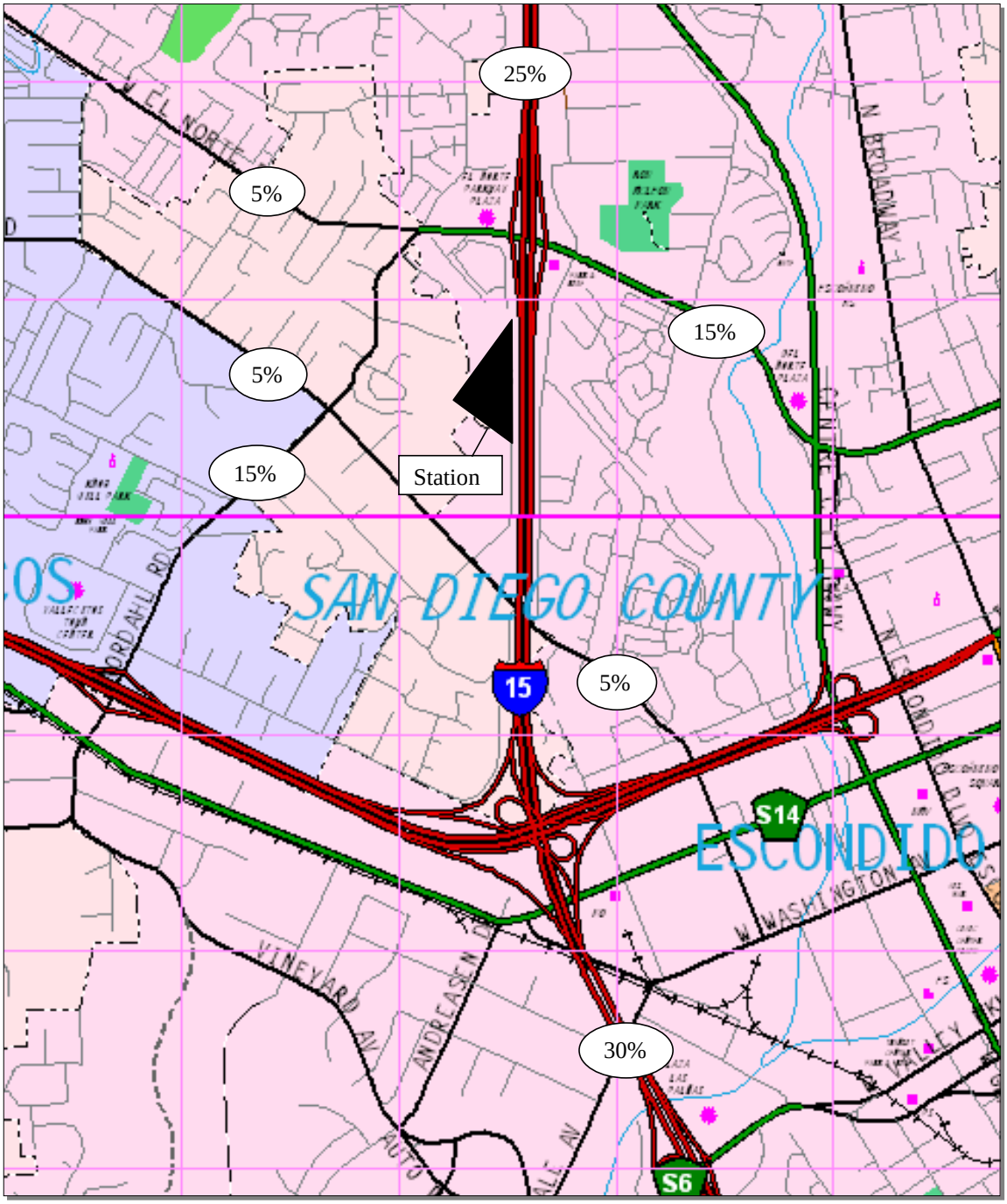


Figure 4.14 Mira Mesa Station Distribution Segment 2A

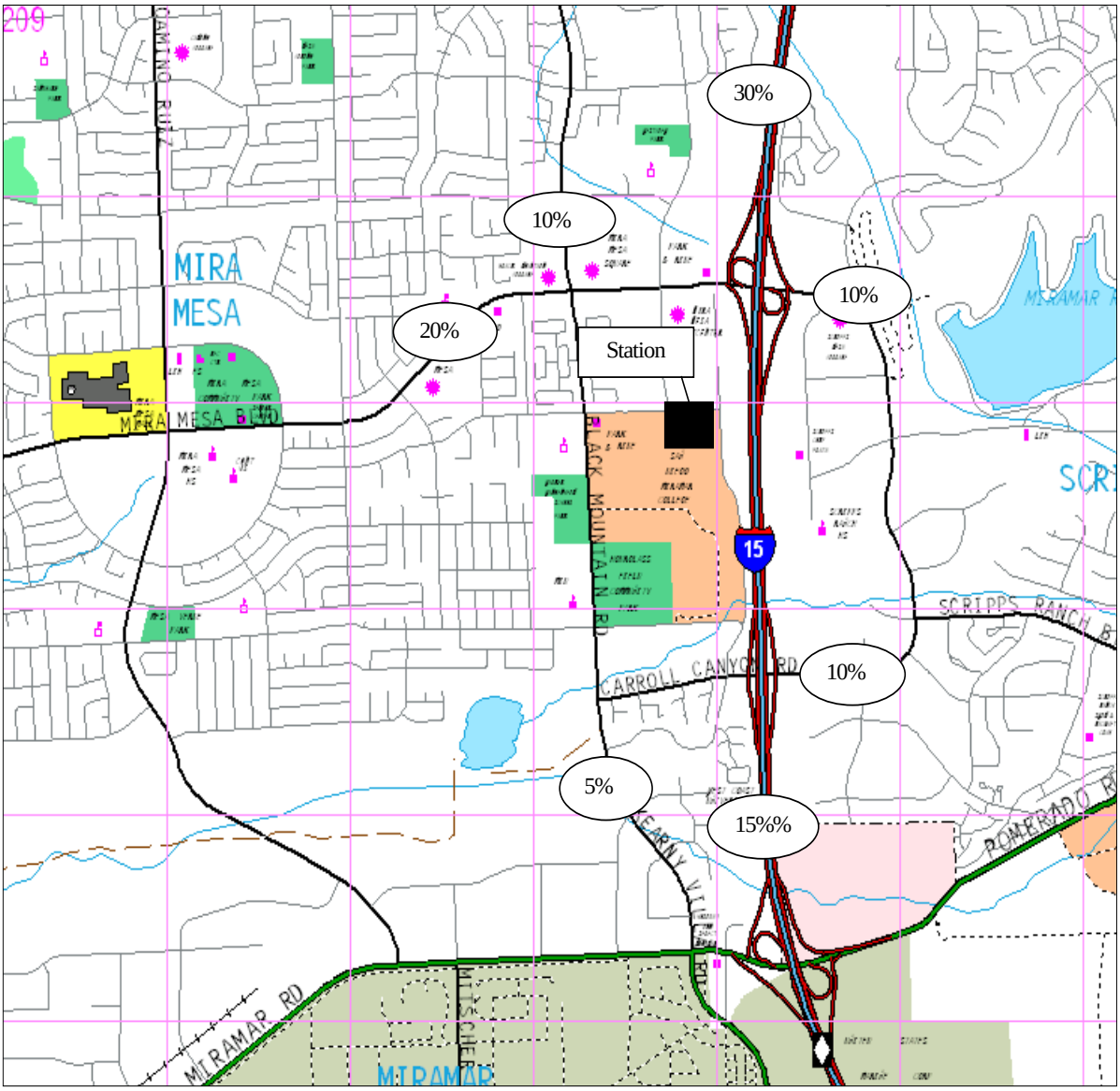


Figure 4.15 Qualcomm Station Distribution Segment 3A

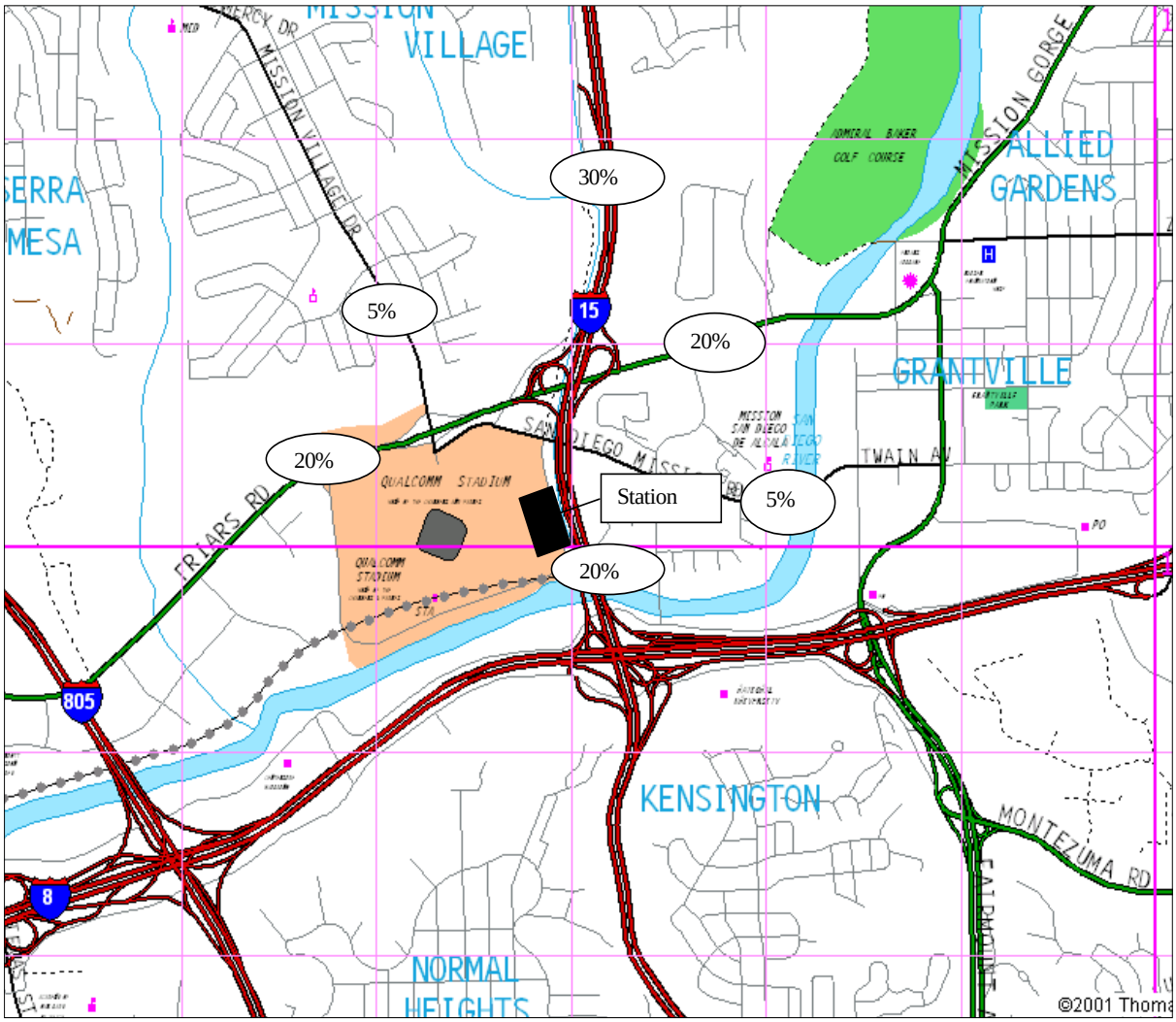


Figure 4.16 Escondido Transit Center Station Distribution Segment 2B

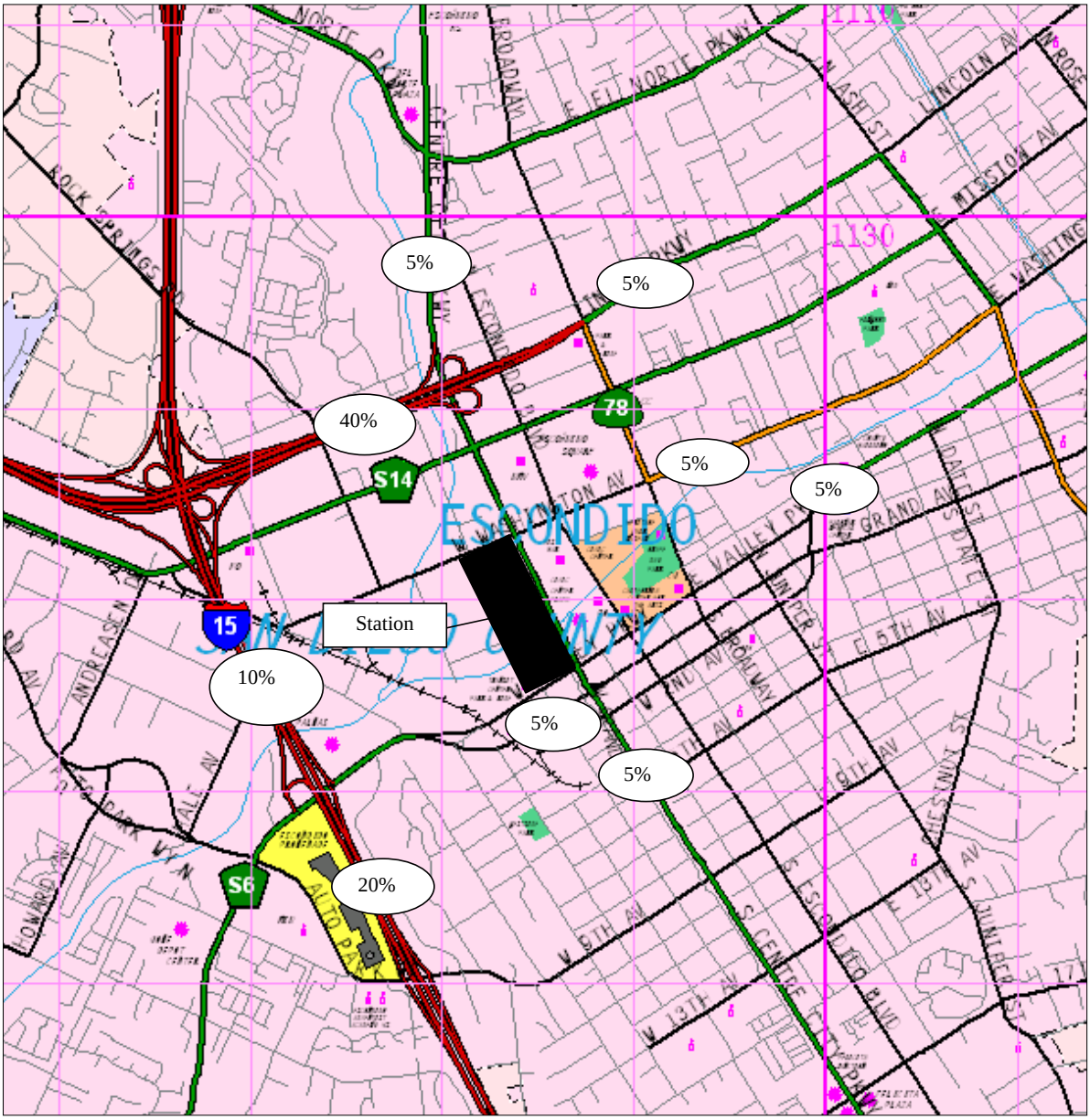


Figure 4.17 UTC Transit Center Station Distribution Segment 3B

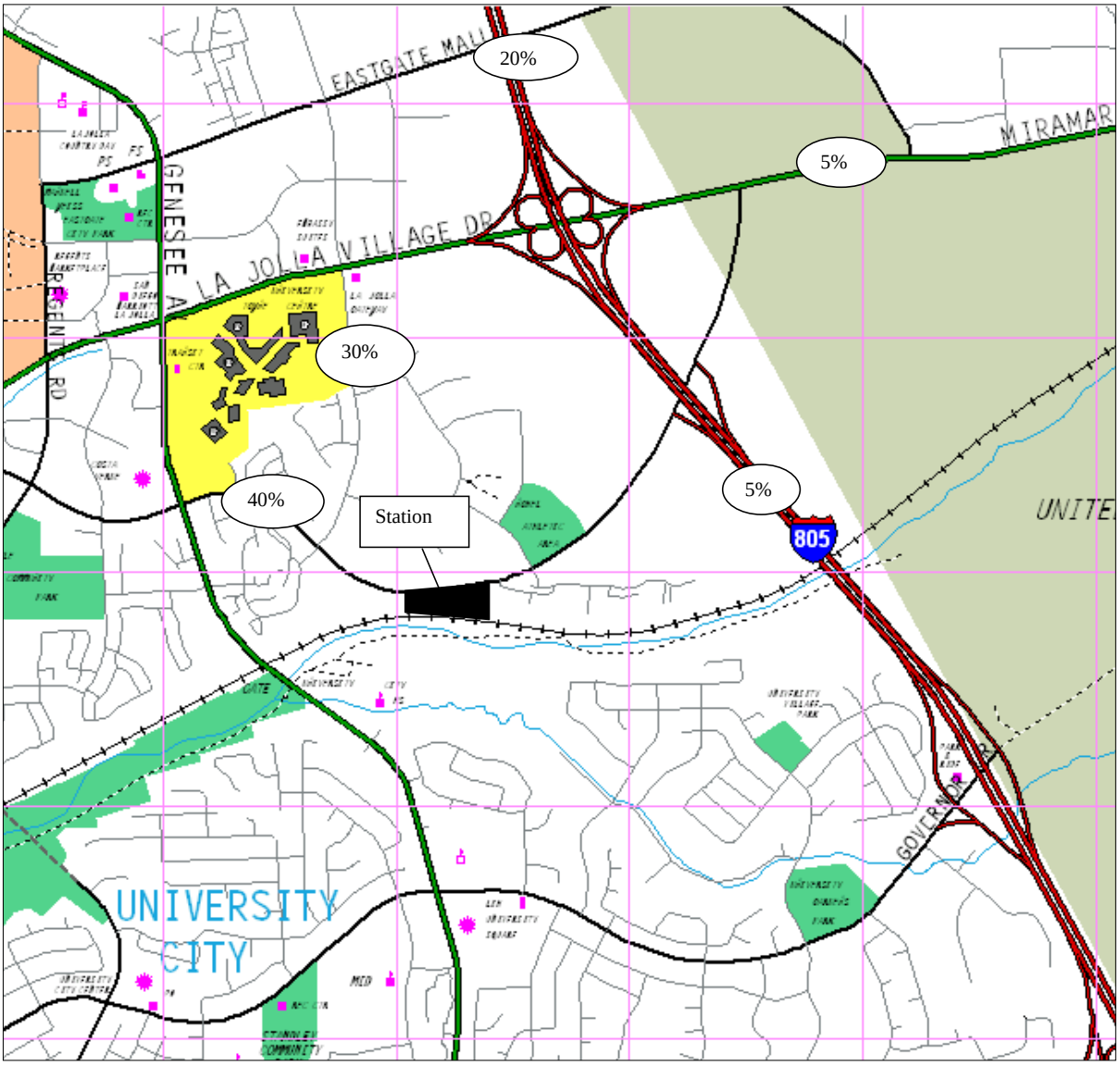


Figure 4.18 San Diego Airport Station Distribution Segment 3B

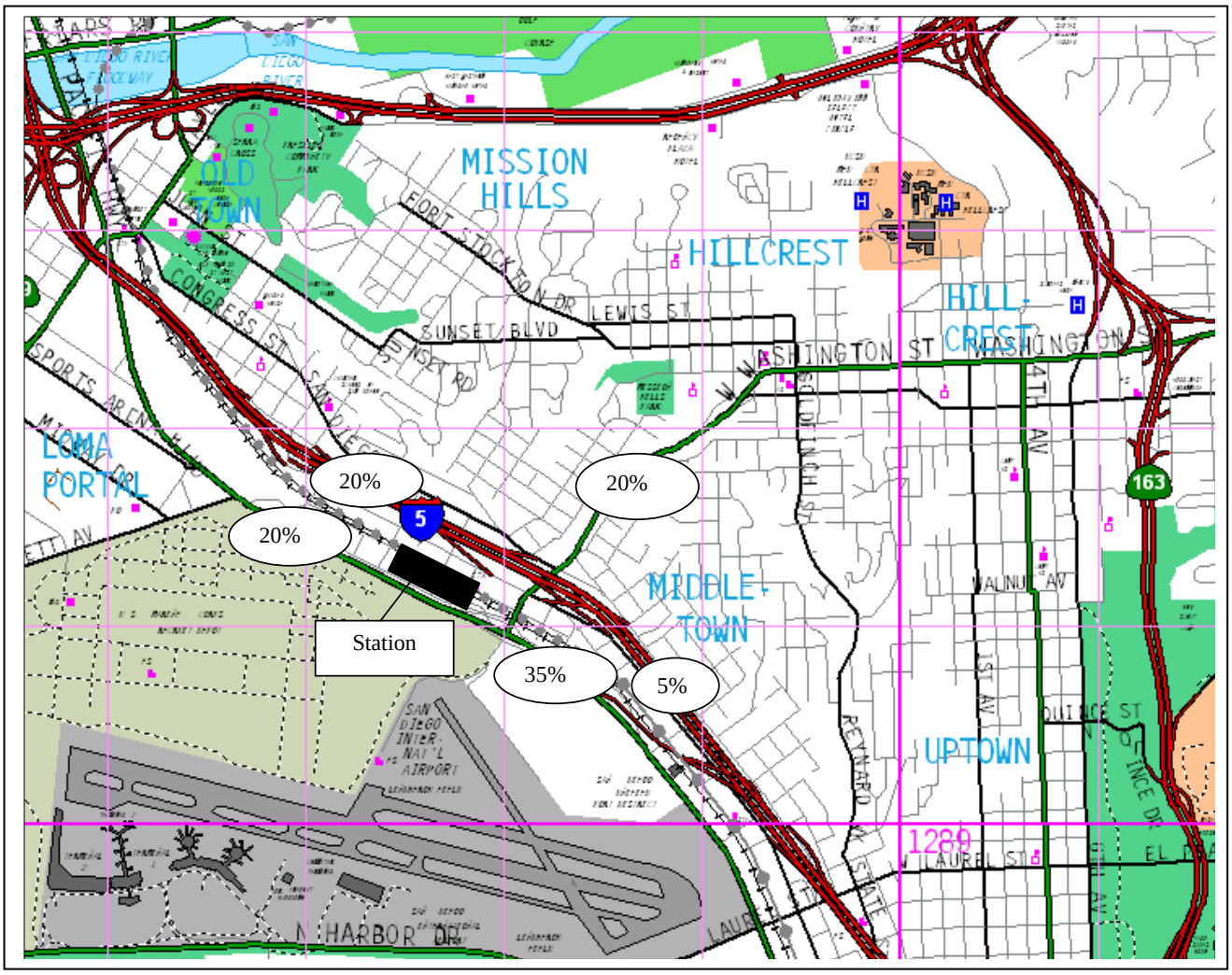
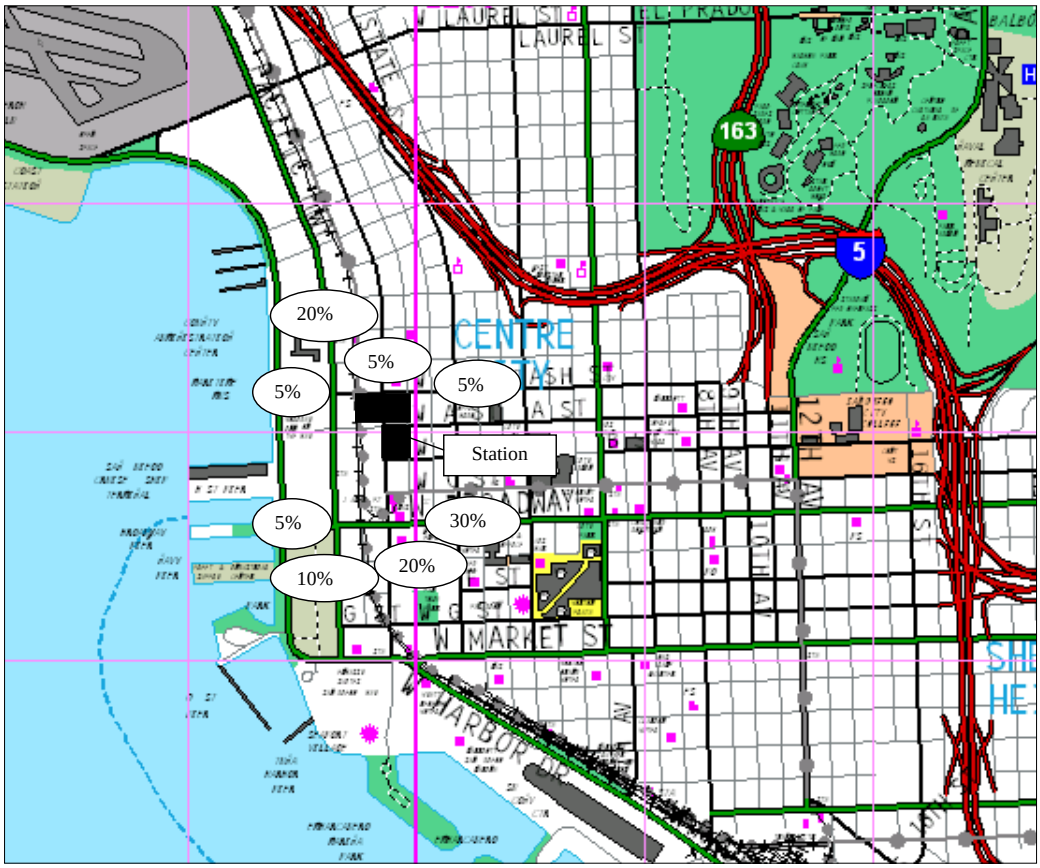


Figure 4.19 San Diego Downtown Station Distribution Segment 3B



4.3.3 Roadway Impact by Screenline

The generated auto trips at stations are then added to the 2020 baseline forecasted traffic volumes along the screenline and the results are presented in Table 4.14.

Table 4.14 - 2020 HSR Alternative AM Peak Hour Roadway Impacts (HSR) by Screenline

Station	Total Screenline Traffic Volume (Vehicles Per Hour)	Total Screenline Capacity (Vehicles Per hour)	Total V/C	LOS
El Monte Station	**6,644**	**7,500**	**0.89**	**D**
South El Monte Station	**4,580**	**6,250**	**0.73**	**B**
City of Industry Station	**7,140**	**7,350**	**0.94**	**E**
Pomona Station	**12,153**	**15,000**	**0.81**	**D**
Ontario Station	**10,366**	**13,800**	**0.75**	**C**
Colton Station	**6,390**	**12,675**	**0.50**	**A**
UCR Station	**2,179**	**4,700**	**0.46**	**A**
San Bernardino Station	**6,170**	**14,550**	**0.42**	**A**
March ARB Station	**4,457**	**7,800**	**0.57**	**A**
Temecula Station	**1,797**	**3,200**	**0.56**	**A**
Escondido Rock Springs	**6,844**	**11,400**	**0.60**	**A**
Mira Mesa	**15,410**	**21,300**	**0.72**	**A**
Qualcomm	**9,344**	**12,300**	**0.76**	**C**
Escondido Transit Center	**12,834**	**13,500**	**0.95**	**E**
UTC Transit Center	**8,170**	**14,400**	**0.56**	**A**
San Diego Airport	**15,616**	**16,500**	**0.95**	**E**
Downtown San Diego	**13,456**	**18,000**	**0.75**	**C**

The airport's aggregate roadway demand (total traffic volume), aggregate roadway capacity, and demand to capacity ratio are presented in Table 4.15.

Table 4.15 - 2020 HSR Alternative Vehicle Demand and Capacity Across Airport Screenlines

AIRPORT and CORDON STREETS	Total Screenline Traffic Volume (Vehicles Per Hour)	Total Screenline Capacity (Vehicles Per hour)	Total V/C	LOS
ONTARIO INTERNATIONAL AIRPORT				
Airport Dr WB (Commerce Pkwy and Haven)	**1,696**	**2,025**	**0.84**	**D**
Airport Dr EB (Grove and Vineyard)	**373**	**1,650**	**0.23**	**A**
Vineyard (D St and Holt)	**741**	**2,025**	**0.37**	**A**
Archibald (I-10 Fwy and Airport Dr)	**2,086**	**2,025**	**1.03**	**F**
SAN DIEGO AIRPORT				
Pacific Hwy (Sassafras to Laurel)	**4,788**	**4,500**	**1.06**	**F**
Laurel St (Pac Hwy to Kettner)	**3,251**	**3,000**	**1.08**	**F**
Hawthorn St (Pac Hwy to Kettner)	**2,739**	**2,700**	**1.01**	**F**
Grape St (Pac Hwy to Kettner)	**2,839**	**2,250**	**1.26**	**F**
Pacific Hwy (Grape to Ash)	**3,488**	**5,400**	**0.65**	**B**
North Harbor Dr (Grape to Ash)	**2,663**	**5,400**	**0.49**	**A**
North Harbor Dr (Nimitz to Spanish)	**3,388**	**5,400**	**0.63**	**B**

The intercity highways aggregate roadway demand (total traffic volume), aggregate roadway capacity, and demand to capacity ratio are presented in Table 4.16.

Table 4.16 - 2020 HSR Alternative Vehicle Demand, Capacity, Total V/C and LOS Across Highway Screenlines

INTERCITY HIGHWAY	Total Screenline Traffic Volume (Vehicles Per Hour)	Total Screenline Capacity (Vehicles Per hour)	Total V/C	LOS
I-10 (I-5 and East San Gabriel Valley)	**8,086**	**7,800**	**1.04**	F
I-10 (East San Gabriel Valley and ONT Airport)	**10,888**	**7,800**	**1.40**	**F**
I-10 (Ontario Airport and I-15)	**10,822**	**7,800**	**1.39**	**F**
I-10 (I-15 and I-215)	**8,662**	**7,800**	**1.11**	**F**
I-15 (I-10 and I-215)	**8,961**	**5,850**	**1.49**	**F**
I-215 (Riverside and I-15)	**7,887**	**5,850**	**1.35**	**F**
I-215 (I-10 and Riverside)	**4,819**	**3,900**	**1.24**	**F**
I-215 (I-15 and Temecula)	**5,171**	**7,800**	**0.66**	**B**
I-15 (Temecula and Escondido)	**6,782**	**7,200**	**0.94**	**E**
I-15 (Escondido and Mira Mesa)	**14,064**	**9,000**	**1.56**	**F**
I-15 (Mira Mesa and SR 163)	**18,027**	**9,000**	**2.00**	**F**
SR 163 (I-15 and I-8)	**9,388**	**7,200**	**1.30**	**F**

4.3.4 Public Transit Impacts by Screenline

Public transit impacts with the High-Speed Train Alternative were quantified by assuming a greater impact would occur on roadways where more bus routes existed due to an increase in potential conflicts

between personal vehicles and buses. However, multiple bus routes serving a train station benefit the station by providing means to disseminate passengers on the local roadway system.

This analysis assumed that the number of bus routes would be similar to the number of routes that currently serve the roadways within the station screenlines. The public transit impacts are summarized in Table 4.17.

Table 4.17 Public Transit Impacts with the High-Speed Train Alternative

STATION	Approximate Number of Buses Within Vicinity of Station	Impact
El Monte Station (1A)	15	Medium
South El Monte Station (1B)	12	Medium
City of Industry Station (1B)	17	Medium
Pomona Station (1A)	19	Medium
Ontario Station (1A)	21	Medium
Colton Station (1A)	12	Medium
UCR Station (1A)	8	Medium
San Bernardino Station (1C)	17	Medium
March ARB Station (1A)	11	Medium
Temecula Station (2A)	6	Low
Escondido Rock Springs	2	Low
Mira Mesa	28	High
Qualcomm	4	Low
Escondido Transit Center	7	Medium
UTC Transit Center	6	Medium
San Diego Airport	7	Medium
Downtown San Diego	33	High

There is a future transit system planned for San Diego County known as Transit First. The goal of transit first is to serve 48% of residential San Diego within ½ mile walking distance of a stop. This plan would link all of the cities of San Diego together while greatly extending the local networks, making public transport the most convenient mode of transport in many situations. The transit first program is proposing four different types of vehicles aimed to serve different types of commuters, the Green Car, Blue Car, Red Car, and Yellow Car. Many of the actual routes for Transit First have yet to be developed. It is planned to create an extensive network throughout the entire county.

4.3.5 Goods Movement Impacts

The truck activity and route designations are assumed to be as the baseline conditions. The impacts are measured by the amount of possible conflict between autos and trucks on the screenline roadways. The results are summarized in Table 4.18.

Table 4.18 Goods Movement Impacts With High Speed Rail Alternative

STATION	Land Use in the Vicinity of the Station	Level of Truck Traffic on Roadways with Station Access	Impact
El Monte Station (1A)	Industrial	High	High
South El Monte Station (1B)	Industrial	High	High
City of Industry Station (1B)	Industrial/Residential	Medium	Medium
Pomona Station (1A)	Commercial	Medium	Medium
Ontario Station (1A)	Commercial	Medium	Medium
Colton Station (1A)	Vacant	Low	Low
UCR Station (1A)	Vacant	Low	Low
San Bernardino Station (1C)	Transpiration & Utilities	High	High
March ARB Station (1A)	Vacant	Low	Low
Temecula Station (2A)	Vacant	Low	Low
Escondido Rock Springs	Residential	Low	Low
Mira Mesa	Residential/Commercial	Low	Low
Qualcomm	Commercial	Medium	Medium
Escondido Transit Center	Commercial and Industrial	High	High
UTC Transit Center	Residential	Low	Low
San Diego Airport	Commercial and Industrial	Medium	Medium
Downtown San Diego	Commercial	Low	Low

4.3.6 Parking Impacts and Issues

Parking impacts with the High-Speed Rail alternative are quantified based on assuming that parking availability would be similar to baseline conditions. It is assumed that the needed parking would be built. Estimates of parking impacts are given in Table 4.13.

Table 4.19 – Parking Impacts With High Speed Rail Alternative

STATION	Available Parking	Issues	Impact
El Monte Station (1A)	Low < 100	Adjacent residential on-street parking	High
South El Monte Station (1B)	Low < 100	Adjacent residential on-street parking	High
City of Industry Station (1B)	Low < 100	Adjacent residential on-street parking	High
Pomona Station (1A)	Low < 100	Adjacent residential on-street parking	High
Ontario Station (1A)	Low < 100	Adjacent residential on-street parking	High
Colton Station (1A)	N/A*	Land is available to build the needed parking	Low
UCR Station (1A)	N/A*	Land is available to build the needed parking	Low
San Bernardino Station (1C)	Low < 100	Adjacent residential on-street parking	High
March ARB Station (1A)	N/A*	Land is available to build the needed parking	Low
Temecula Station (2A)	N/A*	Land is available to build the needed parking	Low
Escondido Rock Springs	Low (<100)	Station users may use adjacent residential on-street parking areas	High
Mira Mesa	Low (<100)	Station users may use adjacent residential and commercial on-street parking areas	High
Qualcomm	Low (<100)	Possible shared parking with the Stadium	Low

Escondido Transit Center	**Low (<100)**	**Station users may use adjacent commercial on-street parking areas**	**High**
UTC Transit Center	**Low (<100)**	**Station users may use adjacent residential on-street parking areas**	**High**
San Diego Airport	**Low (<100)**	**Station users may use adjacent commercial on-street parking areas. Competition is high for the existing long-term off-site airport parking areas.**	**High**
Downtown San Diego	**Low (<100)**	**Station users may use adjacent commercial on-street parking areas. Downtown parking demand is already high.**	**High**

* Not applicable, vacant land.
Impact evaluation based on demand exceeding supply. If demand can exceed supply then impact is high. If demand is reasonably equal to supply then impact is medium. If demand is less than supply then impact is low.

The traffic congestion in this corridor is projected to increase considerably in the next 20 years based on comparisons of Existing and No-Project conditions. The HSR would provide relief from the congestion delay as shown. The HSR Alternative is expected to have minimal traffic impact in the vicinity of stations and it is anticipated that it would have on average medium impact on public transit, high impact on parking and no impact on goods movement around the stations. It should be noted that the HSR Alternative generally stays within the existing transportation corridors and requires minimal right-of-way acquisition.

5.0 REFERENCES

Parsons Brinckerhoff. *Screening Report*. Prepared for California High-Speed Rail Authority, April 2002.

Parsons Brinckerhoff. *Plans and Profiles*. Prepared for California High-Speed Rail Authority, November 2002.

Parsons Brinckerhoff. *Final Draft Environmental Analysis Methodologies*. Prepared for California High-Speed Rail Authority, November 7, 2002.

San Diego Association of Governments (SANDAG). http://pele.sandag.org/trfic.html 2003.

Transportation Research Board. *Highway Capacity Manual 2000.*

Meyer, Mohaddes Associates. *San Gabriel Valley Truck Study*, January 2000.

Meyer, Mohaddes Associates. *Ontario International Airport Master Plan*. Work in Progress.

Southern California Association of Governments. *2001 Regional Transportation Plan.*

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